

***In the Claims:***

Please amend the claims as follows.

The following lists all claims and their status:

1-90 (cancelled)

91. (currently amended): A system configured to assess treatments for disease of a human heart, comprising:

a CPU; and

a system memory coupled to the CPU, wherein the system memory stores one or more computer programs executable by the CPU;

wherein one or more computer programs are executable to:

~~provide at least one image of heart tissue from the heart to a computer system, wherein the image comprises at least two features;~~

perform a first modification of at least one ~~of the features~~ of one or more images of heart tissue;

perform at least one second modification of at least one of the features, wherein the second modification is performed independent of the first modification; and

compare at least one effect of the first modification to at least one effect of the second modification, or compare at least one effect of the second modification to at least one effect of the first modification.

92. (currently amended): A carrier medium configured to store program instructions, wherein the program instructions are executable to implement a method to assess treatments for a human heart, comprising:

~~providing to a computer system at least one image of heart tissue from the heart, wherein the image comprises at least two modifications;~~

performing a first modification of at least one ~~of the features~~ of one or more images of heart tissue;

performing at least one second modification of at least one of the features,  
wherein the second modification is performed independent of the first modification; and  
comparing at least one effect of the first modification to at least one effect of the  
second modification, or comparing at least one effect of the second modification to at  
least one effect of ~~one~~ the first modification.

93-494 (cancelled)

495. (new): The system of claim 91, wherein the first and at least second modifications of at least one feature are compared automatically by at least one of the computer programs based on at least some user input.

496. (new): The system of claim 91, wherein at least one of the features comprises an image.

497. (new): The system of claim 91, wherein at least one of the features comprises at least a portion of an image.

498. (new): The system of claim 91, wherein at least one of the features comprises a numerical feature.

499. (new): The system of claim 91, wherein at least one of the features comprises a numerical feature derived at least in part from at least a portion of an image.

500. (new): The system of claim 91, wherein the first and at least second modifications of at least one feature are compared automatically by at least one of the computer programs by comparing the first and at least second modifications of at least one feature to a database.

501. (new): The system of claim 500, wherein the database comprises data derived from expert opinion.

502. (new): The system of claim 500, wherein one or more computer programs are further executable to divide at least one image into a plurality of sections.

503. (new): The system of claim 500, wherein the database comprises clinical data.

504. (new): The system of claim 503, wherein the clinical data comprises data derived from previous surgical procedures.

505. (new): The system of claim 91, wherein one or more computer programs are further executable to extrapolate at least one portion of at least one feature from at least two images of human heart tissue.

506. (new): The system of claim 91, wherein one or more computer programs are further executable to:

use at least two images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least three-dimensional.

507. (new): The system of claim 91, wherein one or more computer programs are further executable to:

use at least some of a plurality of images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least four-dimensional.

508. (new): The system of claim 507, wherein one of the dimensions comprises time.

509. (new): The system of claim 507, wherein at least one of the dimensions comprises at least one physiological factor.

510. (new): The system of claim 509, wherein at least one physiological factor comprises hormone B-type natriuretic peptide.

511. (new): The system of claim 91, wherein one or more computer programs are further executable to create at least one image of the assessed condition of the heart.

512. (new): The system of claim 511, wherein at least one image of the assessed condition comprises at least a portion appearing three-dimensional.

513. (new): The system of claim 511, wherein at least one image of the assessed condition of the heart comprises progressive coloring.

514. (new): The system of claim 513, wherein progressive coloring comprises grayscale.

515. (new): The system of claim 91, wherein at least one of the computer programs is further executable to assess a volume of at least a portion of the heart tissue.

516. (new): The system of claim 91, wherein at least one of the computer programs is further executable to:

- compare a contrast between two or more sections in at least one image; and
- assess a viability of the heart tissue.

517. (new): The system of claim 91, wherein at least one of the computer programs is further executable to:

- evaluate motion of at least one portion of at least one feature of one or more images of heart tissue; and
- assess asynergy of the heart tissue.

518. (new): The system of claim 91, wherein at least one of the computer programs is further executable to:

evaluate a curvature of at least a section of a portion of a heart comprising the heart tissue; and

assess a shape of at least the portion of the heart.

519. (new): The system of claim 91, wherein at least one of the computer programs is further executable to:

assign at least one reference point to at least two images of the heart tissue;

evaluate a relative movement of at least one of the reference points between at least two images of the heart tissue; and

assess a viability of the heart tissue.

520. (new): The system of claim 91, wherein at least one of the computer programs is further executable to:

determine at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and

assess a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta.

521. (new): The carrier medium of claim 92, wherein the first and at least second modifications of at least one feature are compared automatically by at least by at least some of the program instructions based on at least some user input.

522. (new): The carrier medium of claim 92, wherein at least one of the features comprises an image.

523. (new): The carrier medium of claim 92, wherein at least one of the features comprises at least a portion of an image.

524. (new): The carrier medium of claim 92, wherein at least one of the features comprises a numerical feature.

525. (new): The carrier medium of claim 92, wherein at least one of the features comprises a numerical feature derived at least in part from at least a portion of an image.

526. (new): The carrier medium of claim 92, wherein the first and at least second modifications of at least one feature are compared automatically by at least some of the program instructions by comparing the first and at least second modifications of at least one feature to a database.

527. (new): The carrier medium of claim 526, wherein the database comprises data derived from expert opinion.

528. (new): The carrier medium of claim 526, wherein the program instructions are further executable to divide at least one image into a plurality of sections.

529. (new): The carrier medium of claim 526, wherein the database comprises clinical data.

530. (new): The carrier medium of claim 529, wherein the clinical data comprises data derived from previous surgical procedures.

531. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement a method comprising:  
extrapolating at least one portion of at least one feature from at least two images of human heart tissue.

532. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement a method comprising:  
using at least two images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least three-dimensional.

533. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement a method comprising:

using at least some of a plurality of images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least four-dimensional.

534. (new): The carrier medium of claim 533, wherein one of the dimensions comprises time.

535. (new): The carrier medium of claim 533, wherein at least one of the dimensions comprises at least one physiological factor.

536. (new): The carrier medium of claim 535, wherein at least one physiological factor comprises hormone B-type natriuretic peptide.

537. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement a method comprising:

creating at least one image of the assessed condition of the heart.

538. (new): The carrier medium of claim 537, wherein at least one image of the assessed condition comprises at least a portion appearing three-dimensional.

539. (new): The carrier medium of claim 537, wherein at least one image of the assessed condition of the heart comprises progressive coloring.

540. (new): The carrier medium of claim 539, wherein progressive coloring comprises grayscale.

541. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement:

assessing a volume of at least a portion of the heart tissue.

542. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement:

- comparing a contrast between two or more sections in at least one image; and
- assessing a viability of the heart tissue.

543. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement:

- evaluating motion of at least one portion of at least one feature of one or more images of heart tissue; and
- assessing asynergy of the heart tissue.

544. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement:

- evaluating a curvature of at least a section of a portion of a heart comprising the heart tissue; and
- assessing a shape of at least the portion of the heart.

545. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement:

- assigning at least one reference point to at least two images of the heart tissue;
- evaluating a relative movement of at least one of the reference points between at least two images of the heart tissue; and
- assessing a viability of the heart tissue.

546. (new): The carrier medium of claim 92, wherein the program instructions are further executable to implement:

- determining at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and
- assessing a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta.



547. (new): A system configured to assess treatments for disease of a human heart, comprising:

a CPU; and

a system memory coupled to the CPU, wherein the system memory stores one or more computer programs executable by the CPU;

wherein one or more computer programs are executable to:

perform a modification of at least one feature of one or more images of heart tissue;

compare the modification to at least one reference modification in a database to assess an effect of the modification.

548. (new): The system of claim 547, wherein the modification of at least one feature are compared automatically to a reference modification by at least one of the computer programs based on at least some user input.

549. (new): The system of claim 548, wherein one or more computer programs are further executable to divide at least one image into a plurality of sections.

550. (new): The system of claim 547, wherein at least one of the features comprises an image.

551. (new): The system of claim 547, wherein at least one of the features comprises at least a portion of an image.

552. (new): The system of claim 547, wherein at least one of the features comprises a numerical feature.

553. (new): The system of claim 547, wherein at least one of the features comprises a numerical feature derived at least in part from at least a portion of an image.

554. (new): The system of claim 547, wherein the database comprises data derived from expert opinion.

555. (new): The system of claim 547, wherein the database comprises clinical data.

556. (new): The system of claim 555, wherein the clinical data comprises data derived from previous surgical procedures.

557. (new): The system of claim 547, wherein one or more computer programs are further executable to extrapolate at least one portion of at least one feature from at least two images of human heart tissue.

558. (new): The system of claim 547, wherein one or more computer programs are further executable to:

use at least two images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least three-dimensional.

559. (new): The system of claim 547, wherein one or more computer programs are further executable to:

use at least some of a plurality of images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least four-dimensional.

560. (new): The system of claim 559, wherein one of the dimensions comprises time.

561. (new): The system of claim 559, wherein at least one of the dimensions comprises at least one physiological factor.

562. (new): The system of claim 561, wherein at least one physiological factor comprises hormone B-type natriuretic peptide.

563. (new): The system of claim 547, wherein one or more computer programs are further executable to create at least one image of the assessed condition of the heart.

564. (new): The system of claim 563, wherein at least one image of the assessed condition comprises at least a portion appearing three-dimensional.

565. (new): The system of claim 563, wherein at least one image of the assessed condition of the heart comprises progressive coloring.

566. (new): The system of claim 565, wherein progressive coloring comprises grayscale.

567. (new): The system of claim 547, wherein at least one of the computer programs is further executable to assess a volume of at least a portion of the heart tissue.

568. (new): The system of claim 547, wherein at least one of the computer programs is further executable to:

- compare a contrast between two or more sections in at least one image; and
- assess a viability of the heart tissue.

569. (new): The system of claim 547, wherein at least one of the computer programs is further executable to:

- evaluate motion of at least one portion of at least one feature of one or more images of heart tissue; and
- assess asynergy of the heart tissue.

570. (new): The system of claim 547, wherein at least one of the computer programs is further executable to:

- evaluate a curvature of at least a section of a portion of a heart comprising the heart tissue; and
- assess a shape of at least the portion of the heart.

571. (new): The system of claim 547, wherein at least one of the computer programs is further executable to:

- assign at least one reference point to at least two images of the heart tissue;
- evaluate a relative movement of at least one of the reference points between at least two images of the heart tissue; and
- assess a viability of the heart tissue.

572. (new): The system of claim 547, wherein at least one of the computer programs is further executable to:

- determine at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and
- assess a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta.

573. (new): A carrier medium configured to store program instructions, wherein the program instructions are executable to implement a method to assess treatments for a human heart, comprising:

- performing a modification of at least one feature of one or more images of heart tissue; and
- comparing the modification to one or more reference modifications in a database to assess at least one effect of the modification.

574. (new): The carrier medium of claim 573, wherein the modification of at least one feature is compared automatically to a reference modification by the program instructions based on at least some user input.

575. (new): The carrier medium of claim 574, wherein the program instructions are further executable to divide at least one image into a plurality of sections.

576. (new): The carrier medium of claim 573, wherein at least one of the features comprises an image.

577. (new): The carrier medium of claim 573, wherein at least one of the features comprises at least a portion of an image.

578. (new): The carrier medium of claim 573, wherein at least one of the features comprises a numerical feature.

579. (new): The carrier medium of claim 573, wherein at least one of the features comprises a numerical feature derived at least in part from at least a portion of an image.

580. (new): The carrier medium of claim 573, wherein the database comprises data derived from expert opinion.

581. (new): The carrier medium of claim 573, wherein the database comprises clinical data.

582. (new): The carrier medium of claim 581, wherein the clinical data comprises data derived from previous surgical procedures.

583. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement a method comprising:

extrapolating at least one portion of at least one feature from at least two images of human heart tissue.

584. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement a method comprising:

using at least two images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least three-dimensional.

585. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement a method comprising:

using at least some of a plurality of images of human heart tissue to create at least a second image of human heart tissue, wherein at least a portion of the second image appears at least four-dimensional.

586. (new): The carrier medium of claim 585, wherein one of the dimensions comprises time.

587. (new): The carrier medium of claim 585, wherein at least one of the dimensions comprises at least one physiological factor.

588. (new): The carrier medium of claim 587, wherein at least one physiological factor comprises hormone B-type natriuretic peptide.

589. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement a method comprising:

creating at least one image of the assessed condition of the heart.

590. (new): The carrier medium of claim 589, wherein at least one image of the assessed condition comprises at least a portion appearing three-dimensional.

591. (new): The carrier medium of claim 589, wherein at least one image of the assessed condition of the heart comprises progressive coloring.

592. (new): The carrier medium of claim 591, wherein progressive coloring comprises grayscale.

593. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement:

assessing a volume of at least a portion of the heart tissue.

594. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement:

comparing a contrast between two or more sections in at least one image; and  
assessing a viability of the heart tissue.

595. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement:

evaluating motion of at least one portion of at least one feature of one or more images of heart tissue; and  
assessing asynergy of the heart tissue.

596. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement:

evaluating a curvature of at least a section of a portion of a heart comprising the heart tissue; and  
assessing a shape of at least the portion of the heart.

597. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement:

assigning at least one reference point to at least two images of the heart tissue;  
evaluating a relative movement of at least one of the reference points between at least two images of the heart tissue; and  
assessing a viability of the heart tissue.

598. (new): The carrier medium of claim 573, wherein the program instructions are further executable to implement:

determining at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and

assessing a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta.